dependent adhesion pathways are critical to intervention points in several inflammatory and autoimmune pathologies." A copy of the Lobb article was provided with the reply filed on July 28, 2004. Upon reply by Applicant, before repeating any rejection under 35 U.S.C. § 112, para. 1, the examiner must review the record as a whole, including amendments, arguments, and any evidence submitted by the applicant and properly treat any further showings in the reply. MPEP 2163(II)(B).

The Examiner makes an unsupported assertion that the diseases encompassed by the specification are "unrelated," because showing an inhibition of ligand binding to VLA-4 is "insufficient [to] support that the claimed compounds have specific efficacy in current available form for treating all of the claimed diseases." See page 3 of the Office Action. Applicants respectfully disagree.

Claim 12 is directed to a method of preventing, inhibiting, or suppressing cell adhesion in a mammal in need thereof including the step of administering to the mammal a pharmaceutical composition comprising an effective amount of a cell adhesion inhibitory compound of formula (I).

Each claim must be given its broadest reasonable interpretation in light of and consistent with the written description. Limitations may not be imported into the claims from the specification. MPEP 2163 II(A)(1). The MPEP also states that examiners should not "read into a claim unclaimed results, limitations, or embodiments of an invention" because doing so can "inappropriately change the relationship of an asserted utility to the claimed invention and raise issues not relevant to the examination of that claim." MPEP 2107.02(I). Hence, to determine whether the claim has been enabled, the Examiner must consider whether Applicants have described the preventing, inhibiting, or suppressing of cell adhesion and whether applicants have described how to administer a compound of formula (I) to a mammal.

Applicants have (1) demonstrated how to administer the compound of formula (I), and (2) shown that the compound inhibits cell-adhesion. See pages 30-31 of the specification (assessing VLA-4 inhibitory specificity and describing assays similar to adhesion inhibition). The method of claims 12-15 treats conditions, for example, of inflammatory and autoimmune pathologies, whose pathophysiologies depend on cell adhesion, which is suppressed with VLA-4 inhibition. *See, e.g.,* page 31 of the specification; Lobb, 1722-29. A person of ordinary skill in the art would recognize the nexus between the claimed pathologies and the VLA-4 activity. Thus, Applicants have informed and demonstrated to a person having ordinary skill in the art how to make and use the compound of formula (I) according to 35 U.S.C. § 112, first paragraph.

Thus, claims 12-15 and the specification, satisfy the requirements of 35 U.S.C. § 112, first paragraph.

Finally, the Examiner also maintains a rejection under 35 U.S.C. § 112, first paragraph, because of an alleged deficiency under 35 U.S.C. § 101. See page 2 of the Office Action. Specifically, the Examiner contended that, because the applicants did not claim a method of treating a disease, the Applicants, "by their own admission," failed to set forth a definable utility. See page 2 of the Office Action. Applicants resepectfully disagree. The Examiner has the burden of proving lack of utility. According to the MPEP, "Statements made by the applicant in the specification or incident to the prosecution of the application before the Office cannot, standing alone, be the basis for a lack of utility rejection under 35 U.S.C. § 101." MPEP 2107.02(I); *see e.g. Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.h.*, 945 F.2d 1546, 1553 (Fed. Cir. 1991).

As noted above, Applicants have shown that the compound of formula (I) inhibits cell-adhesion and have shown how to administer the compound to a mammal. See pages 30-31 of the specification (assessing VLA-4 inhibitory specificity and describing assays similar to adhesion inhibition). The method of claims 12-15 treats conditions, for example, of inflammatory and autoimmune pathologies, whose pathophysiologies depend on cell adhesion, which is suppressed with VLA-4 inhibition. *See, e.g.,* page 31 of the specification; Lobb, 1722-29. A person of ordinary skill in the art would recognize the nexus between the pathophysiology of cell adhesion and the VLA-4 activity, and would therefore recognize the value of the compound of formula (I). Furthermore, in light of the specification, a person of ordinary skill in the art would recognize the nexus between the pathophysiologies and the compound of formula (I), and thus know how to use the compound of formula (I). Thus, Applicants have set forth a specific, substantial, and practical utility to satisfy the requirements of 35 U.S.C. § 101 and have demonstrated enablement to satisfy 35 U.S.C. § 112, first paragraph.

Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection under 35 U.S.C. § 101

Claims 12-14 have been rejected as reach through claims under 35 U.S.C. § 101 for not being supported by either a specific and substantial asserted utility. See page 3 of the Office Action. Specifically, the Examiner contends that the phrase "preventing, inhibiting, or suppressing cell adhesion" is not equivalent to a method of using the product for a treatment of a particular disease... of real world relevance. See page 3 of the Office Action. The CCPA has

stated "real world value" is shown when one skilled in the art can use the claimed invention in a manner which provides some "immediate benefit to the public." MPEP 2107.01.

Courts have repeatedly found that the mere identification of a pharmacological activity of a compound that is relevant to an asserted pharmacological use provides an "immediate benefit to the public" and thus satisfies the utility requirement. MPEP 2107.01, Part III, Therapeutic or Pharmacological Utlity; *see Nelson v. Bowler*, 626 F.2d 853, 856, 206 USPQ 881, 883 (CCPA 1980).

Applicants have established a nexus between administering the compound of formula (I) and preventing, inhibiting, or suppression cell adhesion, which is a known intervention point for certain inflammatory and autoimmune pathologies. See pages 27-31 of the specification. The Federal Circuit has found utility for therapeutic inventions despite the fact that an applicant is at a very early stage in the development of a pharmaceutical product. MPEP 2701.01, Part III, *see Cross v. Iizuka,* 753 F.2d 1040, 1051, 224 USPQ 739, 747-48 (Fed. Cir. 1985) (noting that "successful in vitro testing will marshal resources and direct expenditure of effort to further in vivo testing of the most potent compounds, thereby providing an immediate benefit to the public, analogous to the benefit provided by the showing of an in vivo utility"). Thus, applicants have demonstrated a credible and substantial utility for claims 12-14. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 101.

CONCLUSION

Applicants ask that all claims be allowed. Please apply any deposits or credits to Deposit Account No. 19-4293.

Respectfully submitted,

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